



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

H.A

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/935,970 | 08/23/2001 | David Zelig | 22350/17 | 1333 |

7590 01/26/2007
Michael J. Berger
Amster, Rothstein & Ebenstein
90 Park Avenue
New York, NY 10016

EXAMINER

MEW, KEVIN D

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

2616

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
|--|------------|---------------|
| 3 MONTHS | 01/26/2007 | PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

| | | | |
|------------------------------|--------------------------------------|-------------------------------------|--|
| Office Action Summary | Application No. 09/935,970 | Applicant(s) ZELIG ET AL. | |
| | Examiner Kevin Mew | Art Unit 2616 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 49-66 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 49-66 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Detailed Action

Response to Amendment

1. Applicant's Arguments/Remarks filed on 11/3/2006 have been fully considered. Claims 1-48 have been canceled by applicant and claims 49-66 are currently pending.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 49-53, 55-62, 64-66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mauger et al. (USP 6,507,577) in view of Wakayama et al. (USP 7,079,544).

Regarding claims 49, 58, Mauger discloses an apparatus to perform a method for communication, comprising:

specifying a bi-directional data link layer service (MPLS Layer 2 service; note that MPLS is bi-directional) to be provided through a network of label-switched routers (Layer 2 MPLS Tunnel Switch, col. 2, lines 62-65 and Fig. 4) between at least first and second users (between user a and user b, Fig. 5), connected to at least first and second respective ports of first and second respective nodes (respective ingress ports 47 and egress ports 48, col. 5, lines 4-17);
configuring the routers to create a first tunnel through the network for conveying packets from the first node to the second node (a first L2TP tunnel for call request), and a second tunnel

Art Unit: 2616

through the network for conveying the packets from the second node to the first node (a second L2TP tunnel for call reply, col. 6, lines 36-42 and Fig. 5);

in response to a request to initiate the bi-directional data link layer service at the first node, sending a first signaling message containing an indication of the service to be carried through the first tunnel to the second node (exchange topology state packets and report on available bandwidth between nodes, col. 6, lines 25-35);

in response to receiving the first signaling message at the second node, initiating the service at the second node and sending a second signaling message to the first node, wherein the first and second signaling messages are encapsulated in signaling packets so as to establish the service through the first and second tunnels (exchange topology state packets and report on available bandwidth between nodes, col. 6, lines 25-35) while causing all the routers between the first and second nodes to transmit the signaling packets while ignoring the signaling messages (MPLS provides the ability to tunnel through many stages using explicit routing rather than hop-by-hop, col. 1, lines 39-42; note that MPLS tunnels hide details of the IP network topology from the L2TP layer network, col. 6, lines 1-11); and

in response to receiving the second signaling message at the first node, activating the service (establishing the end to end PPP session between two nodes, col. 6, lines 35-42).

Mauger does not explicitly show the service comprising an Ethernet connection through a network of label-switched routers.

However, Wakayama discloses providing VLAN/Ethernet connection through a MPLS network (col. 1, lines 12-19, col. 2, lines 57-60, col. 4, lines 34-44 and Figs. 1 and 2).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combined label-switched communication method and network of Mauger (USP 6,507,577) with the teaching of Wakayama in providing a service that comprises a VLAN connection between end-users via a MPLS network such that the method and network of Mauger will provide the service comprising an Ethernet connection through a network of label-switched routers.

The motivation to do so is to carry out consistent QoS control at each end of the VLAN of the MPLS network so that the VLAN side that receives the packet will be able to perform the same QoS control as the VLAN side that sends the packet.

Regarding claims 50, 59, Mauger discloses the method according to claim 49, wherein the indication of the service comprises a local index indicative of the service to be provided (session request index A, B, DTL (N1, N2) for a PPP session, col. 6, lines 28-35).

Regarding claims 51, 60, Mauger discloses the method according to claim 49 wherein the service parameters comprise an indication of at least one of the first and second respective ports (N1 and N2, col. 6, lines 28-35).

Regarding claims 55, 64, Mauger discloses the method and apparatus according to claims 49 and 58, wherein the first signaling message contains a field identifying a service type of the requested service (identifying the guaranteed bandwidth service between two VPN user nodes, col. 3, lines 33-36).

Regarding claims 56, 65, Mauger discloses the method and apparatus according to claims 49 and 58, wherein the first signaling message comprises service parameters (bandwidth availability) that are configured to form a part a Management Information Base maintained at the first and second nodes (topology state packets that are exchanged between nodes provide sufficient information on bandwidth availability between nodes, col. 6, lines 31-35).

Regarding claims 57, 66, Mauger discloses the method and apparatus according to claims 49 and 58, wherein the signaling packets comprise resource reservation packets in which the signaling messages are encapsulated an object having a class number that causes the routers to ignore the object (PPP session identifier that comprises Tunnel ID and Call ID, Fig. 7).

Regarding claims 52, 61, Mauger discloses the method according to claim 49 wherein the service comprises an Ethernet connection, and wherein the indication of the service is indicative a Virtual LAN (VLAN) value to which the service to be provided (VPN, col. 3, lines 34-46).

However, Wakayama discloses providing VLAN/Ethernet connection through a MPLS network (col. 1, lines 12-19, col. 2, lines 57-60, col. 4, lines 34-44 and Figs. 1 and 2), and wherein the indication the service is indicative of a Virtual LAN (VLAN) value (VLAN ID) to which the service to be provided (QoS service is to be provided, col. 5, lines 54-67, col. 6, lines 1-3 and Fig. 12).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combined label-switched communication method and network of Mauger (USP 6,507,577) with the teaching of Wakayama in providing a service that comprises a VLAN connection between end-users via a MPLS network such that the method and network of Mauger will provide the service comprising an Ethernet connection through a network of label-switched routers, and wherein the indication of the service is indicative a Virtual LAN (VLAN) value to which the service to be provided.

The motivation to do so is to carry out consistent QoS control at each end of the VLAN of the MPLS network so that the VLAN side that receives the packet will be able to perform the same QoS control as the VLAN side that sends the packet.

Regarding claims 53, 62, Mauger (USP 6,507,577) does all the aspects of the claimed invention set forth in the rejection of claims 49 and 58 above, except fails to explicitly show the service comprises a transparent LAN service (TLS), and wherein the indication the service indicative of an instance on which the service is to be provided.

However, Wakayama discloses providing VLAN/Ethernet connection through a MPLS network (col. 1, lines 12-19, col. 2, lines 57-60, col. 4, lines 34-44 and Figs. 1 and 2), and wherein the indication the service is indicative of a Virtual LAN (VLAN) value (VLAN ID) to which the service to be provided (QoS service is to be provided, col. 5, lines 54-67, col. 6, lines 1-3 and Fig. 12).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combined label-switched communication method and network

Art Unit: 2616

of Mauger (USP 6,507,577) with the teaching of Wakayama in providing a service that comprises a VLAN connection between end-users via a MPLS network such that the method and network of Mauger will provide the service comprising a transparent LAN service (TLS), and wherein the indication of the service is indicative a Virtual LAN (VLAN) value to which the service to be provided.

The motivation to do so is to carry out consistent QoS control at each end of the VLAN of the MPLS network so that the VLAN side that receives the packet will be able to perform the same QoS control as the VLAN side that sends the packet.

3. Claims 54, 63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mauger et al. (USP 6,507,577) in view of Ku et al. (US Publication 2002/0085548).

Regarding claims 54, 63, Mauger (USP 6,507,577) discloses does all the aspects of the claimed invention set forth in the rejection of claims 49 and 58 above, except fails to explicitly show the service comprises a SONET service, and wherein the indication of the service is indicative of a SONET path on which the service to be provided.

However, Ku discloses a SONET ring network wherein the MPLS can be used to direct traffic through the SONET network and the different bandwidths are allocated to indicate different SONET OC channels/paths to be provided (paragraphs 0049, 0062).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combined label-switched communication method and network of Mauger with the teaching of Ku in providing a SONET ring path such that a SONET service is provided on a particular SONET OC channel/path.

The motivation to do so is to allow a SONET path be established in order to create a highly bandwidth and high-speed network for carrying network traffic.

Response to Arguments

4. Applicant's arguments with respect to claims 49-66 have been considered but they are moot in view of the new ground(s) of rejection.

Art Unit: 2616

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Mew whose telephone number is 571-272-3141. The examiner can normally be reached on 9:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Seema S. Rao
SEEMA S. RAO 1122/07
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

Kevin Mew *Km*
Work Group 2616